CLAIMS

What is claimed is:

1. A wafer processing system comprising:

a loading station;

a process module maintained at a predetermined pressure during normal operation; and

a first single-wafer load lock directly adjacent to the process module, the first single-wafer load lock having a single wafer support, the first single-wafer load lock being coupled to receive a wafer originating from the loading station.

2. The system of claim 1 further including a second single-wafer load lock directly adjacent to said process module, the second single-wafer load lock having a single wafer support.

3. The system of claim 1 wherein the process module includes a plurality of processing stations.

4. The system of claim 1 wherein the loading station includes a front-opening unified pod (FOUP).

5. The system of claim 1 further comprising a robot between the loading station and the first single-wafer load lock.

6. The system of claim 2 further comprising a pump coupled only to the first and second single-wafer load locks, the pump being located locally on the wafer processing system.

7. The system of claim 1 wherein the single wafer support of the first single-wafer load lock includes a pedestal having an integral cooling unit.

8. The system of claim 1 wherein the single wafer support of the first single-wafer load lock includes a single pedestal having an integral heating unit.

9. A method for handling a wafer in a wafer processing system comprising:

selecting a first single-wafer load lock from a plurality of load locks;

placing a wafer in said first single-wafer load lock;

pumping down said first single-wafer load lock to vacuum;

moving said wafer directly to a process module; and

processing said wafer in said process module.

10. The method of claim 9 further comprising:

moving said wafer to a second single-wafer load lock after said wafer has been processed in said process module;

venting said second single-wafer load lock to atmospheric pressure; and

cooling said wafer while said second single-wafer load lock is being vented.

11. The method of claim 9 further comprising:

moving said wafer to said first single-wafer load lock after said wafer has been processed in said process module;

venting said first single-wafer load lock to atmospheric pressure; and

cooling said wafer while said first single-wafer load lock is being vented.

12. The method of claim 9 wherein said wafer is heated while said first single-wafer load lock is being pumped down.

13. A wafer processing system comprising:

a loading station;

a process module maintained at vacuum during normal processing;

a plurality of load locks, each of the plurality of load locks having an opening in direct communication with the process module and another opening in communication with the loading station; and

a robot between the loading station and the plurality of load locks, the robot capable of transferring a wafer from the loading station to a load lock in the plurality of load locks.

14. The system of claim 13 wherein a first load lock in the plurality of load locks is a single-wafer load lock.

15. The system of claim 14 wherein the first load lock includes a single pedestal having an integrated cooling unit.

16. The system of claim 14 wherein the first load lock includes a single pedestal having an integrated heating unit.

17. The system of claim 13 wherein the robot is an atmospheric robot.

18. The system of claim 13 wherein the loading station is a front-opening unified pod (FOUP).

19. The system of claim 13 wherein the process module has a plurality of processing stations.

20. The system of claim 19 wherein at least one of the plurality of processing stations is capable of heating a supported wafer.